

[0038] What is claimed is:

1. A method for migrating reference data from a source node to a target node, the method comprising the steps of:

a) during a data migration from the source node to the target node, receiving a service request at the target node;

5 b) determining at the target node if the reference data necessary to process the service request has been already migrated from the source node to the target node;

c) if the reference data necessary to process the service request has not been already migrated from the source node to the target node, forwarding the service request from the target node to the source node;

10 d) receiving at the target node a result of a processing of the service request from the source node; and

e) responding by the target node to the service request with a service request response based on the result received from the source node.

2. The method claimed in claim 1, further comprising the steps of:

f) prior to step a), initiating the data migration from the source to the target node;

g) responsive to step c), processing the service request at the source node and issuing the result.

3. The method claimed in claim 1, wherein the source node is a source Home Location Register (HLR) and the target node is a target HLR of a mobile network, and wherein the reference data comprises records of subscribers of the mobile network that need to be migrated from the source HLR to the target HLR.

4. The method claimed in claim 1, wherein step d) comprises the step of:
f) receiving the service request from an external application.
5. The method claimed in claim 4, wherein the external application comprises a Mobile Switching Center (MSC) of the mobile network.
6. The method claimed in claim 2, wherein step f) comprises the step of:
h) starting a transfer of portions of the reference data from the source node to the target node.
7. The method claimed in claim 6, wherein:
the source node is a source Home Location Register (HLR) of a mobile network;
the target node is a target HLR of the mobile network; and
the portions of reference data comprise subscriber records of subscribers of the
5 mobile network, which subscriber records need to be transferred from the source HLR to the target HLR.
8. The method claimed in claim 2, wherein the step f) comprises the steps of:
h) assigning to the source node a slave status; and
i) assigning to the target node a master status;
wherein the target node having assigned the master status is the node that
5 receives, processes and responds to service requests originating from external applications.
9. The method claimed in claim 1, wherein subsequent to step d), the method further comprises the step of:
f) storing at the target node the result of the processing.

10. The method claimed in claim 9, wherein steps a-f are repeated a plurality of times as triggered by a receipt of each new service request from a plurality of service requests received at the target node, wherein the repeated step f) is used for populating a database of the target node.

11. The method claimed in claim 1, further comprising the steps of:

h) completing a transfer of a certain portion of the reference data to the target node;

5 i) receiving a new service request at the target node, wherein a processing of the new service request necessitates the certain portion of reference data;

j) forwarding the new service request to the source node;

k) processing the new service request at the target node and issuing a first result of the processing;

10 l) processing the new service request at the source node and issuing a second result of the processing; and

m) comparing the first result with the second result to determined whether the transfer of the certain portion of reference data was completed successfully.

12. The method claimed in claim 11, further comprising the step of:

n) concluding that the transfer of the certain portion of the reference data to the target node was successful if the first result matches the second result.

13. The method claimed in claim 11, further comprising the step of:
n) concluding that the transfer of the certain portion of the reference data to the target node was unsuccessful if the first result does not match the second result; and
m) transferring again the certain portion of the reference data from the source
5 node to the target node.
14. A system comprising;
a source node from which reference data is to be migrated;
a target node to whom the reference data is to be migrated; and
an external application;
5 wherein a service request originated from the external application is received at the target node during migration of the data from the source to the target node and responsive to the service request, the target node determines if the reference data necessary to process the service request has been already migrated from the source to the target node, and if not, the target node forwards the service request to the source
10 node, which processes the service request and returns to the target node a result of the processing, and the target node responds to the external application with a service request response based on the result received from the source node.
15. The system of claim 14, wherein the data migration from the source to the target node is initiated prior to the receipt of the service request at the target node.
16. The system of claim 14, wherein the source node is a source Home Location Register (HLR), the target node is a target HLR, the system is a mobile network, and wherein the reference data comprises records of subscribers of the mobile network.

17. The system of claim 14, wherein the external application comprises a Mobile Switching Center (MSC) of the mobile network.
18. The system of claim 14, wherein portions of the reference data are in a process of being transferred from the source node to the target node when the target node receives the service request from the external application.
19. The system of claim 18, wherein:
the system comprises a mobile network;
the source node is a source Home Location Register (HLR) of the mobile network;
the target node is a target HLR of the mobile network; and
5 the portions of reference data comprise subscriber records of subscribers of the mobile network, which subscriber records are to be transferred from the source node to the target node.
20. The system of claim 15, wherein for initiating the data migration:
the source node is assigned a slave status; and
the target node is assigned a master status;
wherein the target node having assigned the master status is the node that
5 receives, processes and responds to service requests originating from external applications.
21. The system of claim 14, wherein subsequent to the receipt of the result from the source node, the target node stores the result of the processing.

- 22.** The system of claim 14, wherein the target node comprises a database for receiving the migrated reference data from the source node, and uses the result received from the source node for populating the database.
- 23.** The system of claim 14, wherein once a transfer of a certain portion of the reference data to the target node is completed, the target node receives a new service request which processing necessitates the certain portion of reference data, and acts to forward the new service request to the source node, and wherein the new service request is processed at the target node that issues a first result of the processing, and wherein the new service request is also processed at the source node that issues a second result of the processing, and wherein the first result is compared with the second result to determine whether the transfer of the certain portion of the reference data to the target node was successful.
- 24.** The system of claim 23, wherein it is concluded that the transfer of the certain portion of the reference data to the target node was successful if the first result matches the second result.
- 25.** The system of claim 23, wherein it is concluded that the transfer of the certain portion of the reference data to the target node was unsuccessful if the first result does not match the second result, and in such case, the certain portion of the reference data is transferred again from the source node to the target node.

26. A target node to whom the reference data is to be migrated from a source node, which receives a service request originated from an external application during a process of data migration from the source to the target node and, responsive to a receipt of the service request, the target node acts to determine if the reference data necessary to process the service request has been already received from the source and if not, the target node acts to forward the service request to the source node, and in turn receives a result of the processing of the new service request by the source node, and responds to the external application with a service request response based on the result received from the source node.
27. The target node of claim 26, wherein the target node is a target Home Location Register (HLR) of a mobile network, and wherein the reference data comprises records of subscribers of the mobile network that need to be migrated from the source node to the target node.
28. The target node of claim 27, wherein the external application comprises a Mobile Switching Center (MSC) of the mobile network.
29. The target node of claim 27, wherein portions of the reference data are in the process of migration from the source node to the target node when the target node receives the service request from the external application.
30. The target node of claim 26, wherein for initiating the process of data migration:
the target node is assigned a master status;
wherein the target node having assigned the master status is the node that receives, processes and responds to service requests originating from external applications.

31. The target node of claim 26, wherein subsequent to the receipt of the result from the source node, the target node stores the result of the processing.
32. The target node of claim 26, wherein the target node comprises a database for receiving the migrated reference data from the source node, and uses the result received from the source node for populating the database.
33. The target node of claim 26, wherein once a transfer of a certain portion of the reference data to the target node is completed, the target node receives a new service request which processing necessitates the certain portion of reference data, the target node acts to forward the new service request to the source node and to process the new service request to issue a first result of the processing, and wherein the target node also receives a second result of a processing of the new service request performed by the source node, wherein the target node compares the first result with the second result to determine whether the transfer of the certain portion of the reference data was completed successfully.
34. The target node of claim 33, wherein it is concluded that the transfer of the certain portion of the reference data to the target node was successful if the first result matches the second result.
35. The target node of claim 33, wherein it is concluded that the transfer of the certain portion of the reference data to the target node was unsuccessful if the first result does not match the second result, and in such case, the target node requests a new transfer of the certain portion of the reference data from the source node.